

The

PSO Pileated



June 2021

The Newsletter of the Pennsylvania Society for Ornithology

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From the President's Desk... Gate 1 Road

My home is in northeastern Pennsylvania where 840 square miles of the Glaciated Plateau is designated as Susquehanna County. State Game Land 35 is located within this boundary and is considered by many local birders to be the crown jewel of the county's public lands. I refer to it as 7700 acres of peopleless wilderness. The PGC map names one of its hiking trails as Gate 1 Road. It must be a special route given that it is the only one on the property with a numerical designation. So the number surely refers to the quality of the experience that it offers. When I couple that thought with the padlocked barrier, the "No Motorized Vehicle" sign, and the grass-carpeted path, the trail beckons me in, and I yield to its siren call. To a birder a trailhead always offers potential adventure, beauty, and serendipity.



On this early May morning I quickly find myself immersed in a world of sight and sound. Two Black-throated Blue Warblers are counter-singing nearby as they define their own "political" boundaries. The peaceful song of a Hermit Thrush complements the stillness of the morning air. Down the bank to my left a Louisiana Waterthrush adds his voice to the bubbling waters of the nearby stream. Birds are flitting everywhere. The brilliant,

sunlit scarlet of a tanager in flight catches my eye. Was that nesting material in his bill? Not far from where he lands I glimpse a female deep within the canopy of an oak tree. Her soft green plumage blends perfectly with the fresh leaves of spring. A new summer residence is under construction! These moments remind me of my experiences as a new birder when reveling in the company of these creatures was what it was all about. Prior to this, I had only

known of a taxonomic class called Aves. Now as a birder I was experiencing birds in a new and profound way.

As I continue my amble, the list of species and numbers of individuals grow. Scanning the list, I note most of the "expected" species that will be nesting here have been spotted this morning. But it is still early spring and those birds headed farther north should yet be passing through. This is "big number" season. I need to keep watch for a grey backed thrush among the brown and green ones. Bay-breasted Warblers might yet be present and vocalizing. Yesterday a Hooded Warbler was reported here. Recognizing "Weeta-weeta-weet-tee-o" will be no problem, but I pause to refresh my memory by playing its secondary song on my phone. Then I stop and remind myself this is not all about data entry or needing to put a name to everything. Nor is it about identifying more species than yesterday's

birder. Is competitiveness an inescapable human trait? Life list. Year list. County list. Month list. Top 100 eBirders. First seen. Last seen. There is a point in the birding pilgrimage when we can lose that initial joy of the birds themselves to such distractions as these. Counting is fine but for me apprehending the sublime is the essence of birding. A Magnolia Warbler pops into view just ahead and clears my mind of all but its exquisite beauty.

Yet this knowledge of which birds are around me is not a bad thing. Adding my sightings to the data that science has available to assess and respond to changes in the health of species' populations is more than enough reason to make this list. The vast amount of information that exists about our birds is only exceeded by what we do not yet know. My understanding of the life experiences of the American Redstart hopping from branch to branch just above my head adds to the awe I feel in its presence. These thoughts transform me to a not-too-distant past, to a time when 2.7 kilometers of this path were a research study site for an aspiring young ornithologist. I will always treasure the time spent here in his company as we collected data on his study subjects. Weather-proofing electronics, changing batteries in playback devices, point count surveying, measuring the size of mountain laurel

patches (from overhead!), vacuuming flying insects, photographing the density of understory vegetation, collecting samples of duff: these were all the stuff of research. For three years no Imperial measurements were allowed on Gate 1 Road. Everything that could be randomized was randomized. So goes the science of birds!

It is now several years later and it is now several hours since crossing the trailhead gate. The sun has climbed high into the sky, and the bird song is beginning to wane. My legs are reminding me that the walk to the truck will require retracing the morning's steps. I've never made it to the very end of the trail, but I'm guessing I must be close. The PGC map shows it has an end and so must this journey. I turn and set a brisker pace back but continue to be interrupted by moments of epiphany along the way. On this day, once again, the birds have filled me with the joy of being among them. They have done that same thing as I have hiked through this avocation called birding. Like Gate 1 Road, each individual life journey has a beginning and an end. That holds true for birds and birders. May the earth forever be filled with the color and song of wild birds. As they continue to fill our personal journeys with their wonder, may there always be bird lovers appreciating and protecting them.

Certificates of Appreciation Awarded

Birders were permitted to visit two private homes recently to view rare or unusual birds. PSO issued certificates of appreciation to those families who graciously allowed access to their properties. The total number issued since 2007 is now 177. The full list can be found on the PSO's website. Certificates of Appreciation recently awarded were:

Scott's Oriole, Henry and Linda King, Lancaster Co.

King Rail, Steven Sherrill, Centre Co.

Yellow-headed Blackbird, Scott and Jennifer Furlong, Allegheny Co.

Clay-colored & Fox Sparrows , Roger and Margaret Higbee, Indiana Co.

PSO Pileated Quiz

How well do you know your Pennsylvania birds? See Answers on page 12.

1. Two of our species are very large and very conspicuous for long periods in flight, yet their nests are extremely difficult to find. Which two?
2. Which of our wren species nests primarily in coniferous forests?
3. Which two Corvid species have increased dramatically as breeders in Pennsylvania? For a bonus, which has been confirmed more often as breeding?

4. Which species classified with swallows has increased dramatically in Pennsylvania but was oddly shown as declining in our second breeding bird atlas? For a bonus: Possibly why?
5. Which warbler wandering north of its normal range in the southeastern U.S. has been observed once in a while during our breeding season but has never been confirmed as a breeder in Pennsylvania?

We Bird, eBird

By Vern Gauthier

eBird has taken off, as more and more birders use it to keep track of their personal records and has become an increasingly valuable tool in the collection of avian data across the world. There are things birders should know and can do while using eBird to make the data more valuable to themselves and others. Each issue we will look at some of the things that make eBird better for all. This month; **Using eBird Hot Spots.**

The following information is directly taken from <https://support.ebird.org/en/support/solutions/articles/48001009443-ebird-hotspot-faqs#anchorChoosingAHotspot>

What is an eBird Hotspot?

Hotspots are public birding locations created by eBird users. Hotspots allow multiple birders to enter data into the same shared location, creating aggregated results.

What makes a good eBird Hotspot?

There are several criteria you should consider before nominating a location as a Hotspot:

- Is the location open to the public?
- How large is the area encompassed by the Hotspot?
- How easily defined or identified are the Hotspot's boundaries?

Aim for hotspots that represent specific, well-defined locations. A Hotspot that is small, with easily defined boundaries, is "spatially explicit" - meaning it is easier for scientists to know exactly where you saw birds and associate those sightings with habitat information. Also, the larger or more general a Hotspot is, the harder it is for all birders to use it in a consistent manner.

Does a Hotspot need to have lots of birds?

No! It is not necessary for a "Hotspot" to be an outstanding location for birds or birding. *Hotspots represent a set of public locations that people regularly visit for birding*, regardless of how amazing they are for birds. The primary requirement of a Hotspot is that it is publicly accessible, so avoid places like your yard or other private property.

How do I choose the right Hotspot for my checklist?

When selecting a location for your checklist on eBird Mobile or eBird.org, the map will display nearby Hotspots as red markers with flame icons inside. Tap or click on one of these markers to see that Hotspot's name.

To decide if a nearby Hotspot is appropriate for your checklist, answer this simple question: **Was my entire eBird checklist restricted to the area described by the Hotspot name?** If the Hotspot's name accurately and precisely describes your location for the *entire* checklist,

then it's OK to use that Hotspot for your checklist. However, if any part of your checklist occurred somewhere not adequately described by the chosen Hotspot, please use either a personal location or select a more appropriate Hotspot.

What if my checklist falls within multiple Hotspots?

In some cases, you may not know which Hotspot to use. Other areas may appear to have multiple overlapping Hotspots. Whenever your checklist occurs within several Hotspots at once, *choose the MOST specific Hotspot possible or else use a personal location.* The goal is to reduce uncertainty about your birding location as much as possible.

When should I use a Hotspot instead of a personal location?

Hotspots are a useful way to aggregate results for popular birding locations. However, you should not ALWAYS use a Hotspot for your checklist. *Only use an eBird Hotspot when it accurately represents your entire checklist.* Use a personal location in any situation where no existing Hotspot precisely describes your location or route.

Precision is preferred.

In areas with few Hotspots, personal locations often provide a more accurate depiction of your trip, especially when you give your personal locations descriptive names (e.g., "Suttle Rd. from first driveway to hydrant"). The more precise you make your birding location, the easier it is for scientists to associate your observations with habitat information.

How do I merge a personal location with an existing Hotspot?

If you make a personal location for your checklist(s) in the field, then later realize an existing Hotspot would have been equally appropriate for those lists, you can merge your personal location with that Hotspot. This will move all checklists from that personal location to the Hotspot instead.

More information

Follow this link for more information on eBird best practices

<https://support.ebird.org/en/support/solutions/articles/48000795623-ebird-rules-and-best-practices>

As an eBird user or reviewer, if you have a topic you would like to have covered in a future article please contact me at verngauthier14@gmail.com.

PSO Grants Awards in 2021

Two Student Research Grants have been awarded by PSO. The award is designed to provide support to either graduate or undergraduate students in pursuit of a bachelor's degree, master's degree, or doctorate. The research is to be conducted in support of a thesis or dissertation and will be eventually published. Proposals will be judged for their scientific merit and the likelihood that the work will make a meaningful contribution to our understanding of Pennsylvania's avifauna.

One award goes to Andrea Lindsay who is a PhD candidate at the University of Toledo and stationed at Powdermill Nature Reserve in Westmoreland County, PA.

Her research is entitled "Using Stable Isotope Analysis of Subcutaneous Fat to Identify Distance of Migratory Flights in Songbirds." Andrea is the student of Dr. Henry Streby, Associate Professor in the Department of Environmental Sciences at the University of Toledo..

Ty Basinger is the other recipient and is a Master's candidate at Bloomsburg State University. His research topic is "Tree Swallow Prey Selection in Artificial Wetlands." He is the student of Dr. Lauri Green, Assistant Professor in the Department of Biological and Allied Health Sciences at Bloomsburg University.

2021 PSO Virtual Meeting Planned

Coming in the fall of 2021, PSO will host our first virtual membership meeting, open to the public. Due to the ever-changing conditions of the Covid-19 pandemic, we decided to not hold an in-person meeting for the second year in a row. However, we know that our membership misses being part of a meeting, and PSO misses our members! We understand that some members are simply unable to attend in-person meetings, and while we look forward to regular annual gatherings in person in the near future, PSO is embracing the opportunity to meet with you virtually this year.

We are penciling in a Zoom webinar for September in place of our regular annual meeting. The agenda is not yet developed, but the online gathering will include our standard annual business meeting with voting on new members of the PSO Board of Directors, as well as a notable speaker with an exciting current bird-related presentation.

Please watch for future communications via email and social media as more details become available for this event. Thank you for being part of our membership in these challenging times!

Recap of Board of Directors' Meeting

The Pennsylvania Society for Ornithology Board of Directors met on March 30, 2021, with 15 directors present for the teleconference meeting.

The PORC report was presented noting that David Yeany is the new chairperson of the committee. Scott Stoleson and Julia Plummer will replace two retiring members. A searchable database of all PORC records is being designed.

A motion, which passed unanimously, was made and seconded to donate \$100 every year to the American Bird Conservancy.

Board members' terms and elections were discussed. After some discussion it was decided to have board members' terms run from annual meeting to annual meeting as that is when elections are normally held. A list of possible candidates to replace retiring board members was compiled and various methods of conducting an election of board members this year was discussed. In addition it was suggested that we advertise for candidates for the board through various social media.

It was noted that the preparations for the B4C are going well.

(continued on page 8)

The Raven Reporter

Tales of Discovery about Pennsylvania Birds



Red-breasted Nuthatches Persist into Spring

After a fall and winter of news about irrupting boreal birds, we have not stopped checking for some of the remnants of this invasion from the north. A few Evening Grosbeaks have been reported lately, mostly at persistent feeders, but they seem to be moving north. A few Red-breasted Nuthatches lasted the winter and seem now to have paired up and are persisting on territory in conifer groves. In Ricketts Glen State Park, I have found multiple pairs in various parts of the park that are probably nesting. Some of these are near areas where they had foraged on white pine seeds in the early winter, but now that food resource has been exhausted. Other nuthatches are in different locations than where they over-wintered because they are resourcefully using insect and other foods that are now available.

Are others finding Red-breasted Nuthatches this spring? If so, these records could be important to enter into eBird as part of the continuing story of the 2020-2021 boreal bird irruption. The same could be said for Pine Siskin, Evening Grosbeak, and Red Crossbill. Many of the Red Crossbills reported in our state were the Type 10 birds often associated with Sitka spruce. The ones I found were feeding on white pine seeds. It would be a great discovery for birders to find nesting populations of Red Crossbills or Evening Grosbeaks in the state. Birders should not give up their interest in these species and should check out areas where they could be found this summer. I have already started my search.

Cerulean Warbler Expansion

Although Cerulean Warbler is certainly one of the highest priority forest songbird species in North America, it has declined broadly and steeply across the continent. Ceru-

leans are birds of tall deciduous trees where canopy gaps occur, usually in mature forests along streams or hillsides. In most cases the canopy gaps are natural or the unplanned byproduct of human activities, like the building of trails, roads, and rights-of-way. Some timber management has been done on its behalf with judicious cutting to open the canopy of mid-aged forests. Despite the general decline, there are some new clusters of Ceruleans across the Pennsylvania landscape to counter that negative trend. Nick Bolgiano has been conducting Cerulean mapping surveys along the Lower Trail each summer and finds that the populations vary annually. If a closely monitored population is that variable, it suggests that long-term monitoring is needed to really assess any trends and potential management. It is wise to not assume that Ceruleans remain only in the areas where we have found them before.

Cerulean Warblers can be found along the Allegheny Front in several counties. They have been found on BBS routes and Atlas surveys across north-central and northeastern counties where they had not been reported previously. There are many more Ceruleans in the Poconos and the Upper Delaware River Valley than fifty years ago. Some of the timber management on game lands and forestry lands may benefit Ceruleans. Several Ceruleans have been found in the eastern part of SGL 57 on Sorber Mountain near Noxen, Wyoming County, by Jeff Stratford of Wilkes University. There the Ceruleans are locally common. Many of these territories are off-road and associated with recent timbering activity. I have been keeping an eye on a small population in Ricketts Glen State Park in oak and maple woods not far from Route 118. These Ceruleans are singing over an old grassy service road, a narrow telephone line right-of-way, and some rocky outcrops. The population seems to be growing in this off-trail location, out of sight and sound from curious birders. Other populations may exist on the mountainsides of the Allegheny Front that would be worth monitoring. Keep an ear and eye out for new Cerulean Warblers near you. A new shelterwood or selective cut may create more Cerulean habitat. I am putting my new Cerulean observations into eBird, and I hope that you do, too.



Doug photographed this Cerulean Warbler at Ricketter Glen State Park..

Theodora "Teddy" Cope Gray: Overlooked Pennsylvania Ecology Heroine

A lot of attention has been given to women scientists in recent years. This is long overdue, and many of us have

benefitted from working with women scientists and have been inspired by their fabulous contributions. In Pennsylvania we now have several bird and wildlife biologists making significant strides in bird science and conservation. Among them are Margaret Brittingham, Laurie Goodrich, Patti Barber, Kim Van Fleet, Samara Trusso, Sarah Sargent, Cathy Haffner, Aura Stauffer, Tammy Colt, Emily Thomas, Alison Fetterman, Bridgett Stutchbury, and others. I was inspired to be a bird researcher by the writings of Margaret Nice who studied Song Sparrows in great detail and with great skill. There are other women of the feathered tribe as well who have been overlooked, sometimes by their own design, as well as by the attitudes of society in the day toward professional women of science or those that tried to become one.

While researching the birds of North Mountain, a friend made me aware of an obscure but important ecological study made by a woman. It is a Ph.D. dissertation entitled "Observations on the Vertebrate Ecology of Some Pennsylvania Virgin Forests." This scholarly work followed her M.S. thesis, "Some Observations of the Vertebrate Ecology of a Pennsylvania Mountain Farm." These projects were completed by one of the country's first woman ecologists, Theodora Morris Cope (1906-2000). Theodora or "Teddy" was the daughter of Francis R. Cope and Evelyn F. Morris Cope of Germantown who owned a farm near Dimmock, Susquehanna County. The Master's thesis was based on studies at that farm. Her Ph.D. thesis was based on studies in four old growth (virgin) forests: 1. Woodbourne forest, Susquehanna County; 2. Silver Lake forest, Susquehanna County; 3. North Mountain including the Ganoga Lake forest (now part of Ricketts Glen State Park), and Dutch Mountain, Sullivan, Wyoming, and Luzerne County; 4. Tionesta Tract in Allegheny National Forest. Of course, I have been studying her observations of birds and other vertebrates of North Mountain which are very useful to understanding the history of the region and the potential for ecosystem recovery.

The old growth forest thesis is full of interesting details about the birdlife of North Mountain near Ricketts. For example, Olive-backed (now Swainson's) Thrush was fairly common and could be found with Hermit, Wood, and Veery. She noted that this area and the Tionesta Tract were probably the only places where all four forest thrushes could be found together. Cope noted the boreal species found on North Mountain that she had experienced on her trips to Canada. These included the Northern Goshawk, Dark-eyed Junco, Brown Creeper, White-throated Sparrow, Red-breasted Nuthatch, Canada Warbler, Black-throated Blue Warbler, Blackburnian

Warbler, Olive-sided Flycatcher, Northern Waterthrush, and Winter Wren. Since she stayed several weeks in a cabin and talked to naturalists living in the area, Teddy was aware that Great Horned Owls, Barred Owls, and Northern Saw-whet Owls were common. At that time, Chimney Swifts commonly flew over the tracts of virgin forests, presumably nesting in old trees and snags. She also recorded accounts of rare mammals such as a Canada Lynx that was reported to be trapped in Crane Swamp, a boreal forested wetland near Coalbed Swamp, four years before her thesis was written. At that time, Snowshoe Hares were "locally common along the summits." When I walk the trails in the conifer forest of Ricketts Glen and Dutch Mountain, I am following the boot prints of Teddy as well as ornithologists and naturalists such as Otto and Herman Behr, Witmer Stone, Jonathan Dwight, and Skip Conant.

Teddy led a remarkable life that included three different husbands and notable publications. She is perhaps best known for writing about her two summers in a remote British Columbia location far from any road, railroad, or telephone where wildlife abounded, including wolves. She called this wilderness home "Driftwood Valley" and published an award-winning book about her experiences. Later she wrote and published *The Tundra World* and *Clear Lands and Icy Seas* about adventures in Churchill and in the eastern Arctic, respectively. She was fascinated by and sympathetic to natural predators, including bobcats around Ricketts and wolves in Driftwood Valley. She also did not disclose the location of a goshawk territory near Lopez out of concern that it would be disturbed. Teddy was fascinated by all things natural and avoided anything remotely like modern technology. She also avoided any publicity. That is why you probably have never heard of her before. Not only did she leave us these remarkable literary and scientific works, but the Cope family gifted all of us the Woodbourne Forest and Wildlife Sanctuary in Susquehanna County.

For more information about this remarkable woman, please see Marcia Bonta's blog. Marcia is herself a remarkable woman who has given us so much with her copious and thoughtful writings about wildlife and nature in Pennsylvania. We also owe her much.

[Theodora Cope Gray – Nature's Own Child | Marcia Bonta \(wordpress.com\)](http://www.marciabonta.com)

Good birding!

Doug Gross
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A Different Kind of Fallout

Twenty years ago three friends and I left eastern Pennsylvania around midnight to drive down to the Great Dismal Swamp area of southern Virginia and northern North Carolina. As usual, my husband David didn't go because farming, not birding, is his thing. But he never objected when I went, and all he wanted to know was where I was going and when I was coming back. That's probably why we're still together after 51 years.

That trip came vividly back to my mind at the end of April when I was forwarded a photo of a major migrant fallout at South Padre Island, TX. The ground there was covered with birds – Baltimore and Orchard Orioles, Indigo and Painted Buntings, Scarlet and Summer Tanagers, etc. It was one of those fallouts caused by an approaching cold front that birders dream about. But the fallout the four of us saw on our trip south was not a welcomed one.

On our way to Virginia during the night we stopped for a breather on the Chesapeake Bay Bridge Tunnel. When we got to a pulloff area, we got out to stretch on what was a very windy night and noticed movement in the lights over the parking area. At first we weren't sure what we were seeing, but when our eyes adjusted to the darkness, we realized birds were flying through the light rays. And then we saw birds all over the ground around us. They were being pushed down by the strong winds off the water as they were migrating, and they were everywhere.

With the help of flashlights we saw vireos, buntings, kinglets, orioles, and warblers, including many of the ones difficult to find in treetops during normal spring birding forays. I remember being dumbfounded by the sheer number of birds, actually too many to count, and no doubt there were many others that we couldn't see. A lot of the ones on the ground were just stationary, hardly moving at all, but many of them were obviously dead. Either they were killed by the weather as they descended or possibly some had been run over or killed by moving vehicles.

How bizarre it was seeing many of the warbler species birders lust after lying dead at your feet in the dark. I had never before seen so many warbler species at the same place at the same time, and most of them were dead. Expired Cape Mays were lying next to dead

Blackburnians that were next to dead Tennessee Warblers, etc.

Eventually we got to the Dismal Swamp where we birded for the next several days. There we saw Red-cockaded Woodpeckers and Swainson's Warblers, as well as some of the area's 70 reptile and amphibian species. Fortunately, we didn't encounter any of its bobcats or bears.

But that trip, like so many others that I've been fortunate enough to take at times for birds in both North and South America, showed me things about nature that I would never have learned about by just chasing rarity reports. Not everything we birders encounter is uplifting or pleasant. But experiencing them often helps makes us more aware of what we can do to help preserve our natural environment for birds and all kinds of wildlife. Everything's connected.

Obviously I can't do anything about storms. But I can try to keep our property as natural as possible by planting native trees, shrubs, and perennials. I don't want to sound like I'm preaching because when you preach no one listens to you anyway. But years ago it was our decision to not cut natural grassy areas often, use pesticides, or get rid of native poison ivy vines if they're somewhere away from human activity. We let wild violets grow not only because they're pretty, but because the caterpillars of some butterflies need them. And we let dead trees stand where they are.

And obviously bird trips can be memorable for things other than birds. On that trip by the time my roommate and I got to bed after driving all night and birding all day, we were exhausted. But twice after we passed out, men came to our motel door and woke us up, one of whom had a key. And, while I have no proof, I suspect that the normal occupants of that cheap motel room were females conducting a different kind of business.

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Paul Hess “Retires” from Birding Magazine, Not from PSO

After 320 articles in the News and Notes / Frontiers in Ornithology columns in magazine, Paul has moved on. Read the complete article in *Birding*, Vol. 53, No. 1, March 2021 (<https://www.aba.org/birding-online-march-2021/>). He's still writing PSO's Ornithological Research (page 7) and compiling the birding quiz (page 2) as well! Thank you, Paul!!!

Pennsylvania Ornithological Research

Salute yourselves, Pennsylvania hawk watchers! We've made a significant contribution to worldwide understanding of raptor migration.

A study published in 2021 in the British Ornithologists Union journal *Ibis* by Christopher J. W. McClure, Brian W. Rolek, Gregory W. Grove, and Todd E. Katzner is based primarily on birders' participation in our pioneering roadside Winter Raptor Survey organized and compiled annually by *Pennsylvania Birds* Editor Greg Grove.

Evaluations of raptor population trends rely heavily on year-to-year road counts such as ours to estimate variations in migratory species' abundance, most notably to judge which species' populations may be in trouble.

Imagine this: The study is based on 2,155 road surveys conducted from 2001 to 2018 by Pennsylvania's birders who are honored by the authors as "community scientists." Our winter surveyors faithfully submitted records to Greg spanning 85,000 individuals of 14 raptor species.

Imagine this as well: When asked how long he spent compiling the data for the study, Greg supposed it was a couple hundred hours. Without his immense commitment and the efforts by all of us who supplied him with the data, this important research would not have been possible.

The results showed that wintering Bald Eagles, Red-shouldered Hawks, and Black Vultures increased during

the course of the study. Meanwhile, counts of Turkey Vultures, Northern Harriers, Rough-legged Hawks, Red-tailed Hawks, and American Kestrels varied more than the other species.



Steve Gosser photographed this dark morph Rough-legged Hawk in Crawford County in February 2011.

In addition, the authors found that the raptor counts were significantly correlated with yearly winter temperature fluctuations and with our road speeds while making the counts. We might have suspected those factors intuitively, but it is worthwhile to see them reflected statistically.

So we have produced an extraordinary amount of important data internationally valuable while we drove along sometimes icy roads, endlessly scanning with binoculars, sometimes seeing disappointingly few raptors, while hoping especially for a "good find" like a Rough-legged Hawk. This study shows that even a relatively unexciting Red-tail can offer important ornithological and ecological information.

The reference is: McClure, Christopher J.W., Brian W. Rolek, Gregory W. Grove, and Todd E. Katzner. 2021. Yearly temperature fluctuations and survey speed influence road counts of wintering raptors. *Ibis* 163: pp. 595-606.

It is available on the British Ornithologists Union website: <https://onlinelibrary.wiley.com/doi/10.1111/ibi.12914>.

Paul Hess
Natrona Heights, PA

Recap of Board of Directors' Meeting (continued from page 4)

The idea of a virtual meeting open to the public was put forward to keep the interest of our members and to possibly attract new members.

Three research grant proposals have been received and it was agreed that two scholarships could be awarded.

A complete transcript of the meeting minutes may be found on the PSO website, pabirds.org.

Roger Higbee, Secretary

Conservation Chat Room

Amazing Race: Flying North



I'm always amazed that the spring months follow a different sense of time than the winter months. I'm convinced that time moves faster during the spring. It's now mid-May, but just yesterday we were enjoying some unusually warm winds in March. That taste of spring was an early

promise that winter was losing its grip. The amphibians took to the vernal pools to begin the next generation while many of us dreamed of spring flowers and birds.

Farther south in the tropics, there was a different stirring of anticipation, as billions of birds looked skyward, preparing for their long nocturnal flights north to their breeding grounds – some would find refuge in our forests and swamps for the summer while others would fly thousands of miles to the boreal forest– the greatest songbird nursery in North America.

The migratory restlessness of birds is both a wonder and a mystery, but we do have some glimmers of understanding. German researchers have known since the 1940s that birds really do show migratory restlessness and that they depend on an internal magnetic compass for orientation. This restlessness has a funky name: researchers call it *Zugunruhe*.¹ More recently, we've learned that a protein found in a bird's eye is the control center for navigation, but the basic sensory mechanisms are still elusive.² Since most of these warblers migrate at night, it is also thought they use the stars for navigation. Imagine navigating by starlight...

My favorite group of birds is the American wood warblers – 34 different species spend some time in Pennsylvania, whether it's during the breeding season or stopping by for refueling before heading farther north. The forests in our state serve critical roles in providing food, breeding habitats, and protection for billions of migrating wood warblers every spring and fall.

These feathered jewels are a marvel of nature. Holding two nickels (or 10 M&Ms) in your hand will help you

understand that wood warblers are very small and lightweight, but what they accomplish is truly amazing. They fly thousands of miles twice a year during migration, raise a family in just a few months, and perform important insect control so quietly that many people never even see them. Other than birders and ornithologists, people most likely to see and hear warblers are we forest landowners. Once you thrill to their trills or fling your eyes to their flashy feathers, you'll be hooked on warbler watching; there's nothing more exciting than seeing them in your own woods.

Worm-eating Warblers nest on the ground in large forest blocks, especially in the Ridge and Valley Province. Their nests are hidden among piles of leaf litter at the base of a shrub, usually on a forested hillside, so they depend on a thick understory.

While most wood warblers are brightly colored, one exception is the Worm-eating Warbler. It spends much of its time in the understory or midstory, poking its bill into clusters of dead leaves for caterpillars (once called worms) and other insect larvae, as well as spiders and other arthropods. We watched a Worm-eating Warbler foraging on the ground in our woods last spring when we participated in Migratory Bird Day on May 9, 2020. Check out www.migratorybirdday.org if you'd like to participate next year: it's always the 2nd Saturday in May. Our state's large tracts of forests provide habitat for 10 percent of the total breeding population of Worm-eating Warblers, so Pennsylvania's forests are critical for this species' survival.³

Many of these birds spend the winter in Central America and Bermuda and fly as far north as New York to breed. The Worm-eating Warbler that we watched probably left its wintering grounds in March or April and might have flown over the Gulf of Mexico, but very few details are known about this species' migration.

On the opposite end of the color spectrum is the male **Blackburnian Warbler**. Its unique, vivid flame-orange color should make it a standout, but it prefers the highest treetops, making it hard to see, even with binoculars. We don't often see Blackburnian Warblers in our woods since most of them nest in mature conifers - especially hemlock forests and mixed deciduous forests in the northern tier of

Pennsylvania. Many more nest in the boreal forests of Canada, but they do visit our woods in Bedford County during migration. Blackburnians leave the forested Andes in northwestern South America to fly thousands of miles north to breed, but along the way they need to rest and refuel in “stopover forests.” On May 11, we were treated to two Blackburnian Warblers feeding on insects in the tall trees behind our house.



Blackburnian Warbler

Large areas of southwestern and southeastern Pennsylvania are no longer suitable habitat for Blackburnian Warblers since they are especially sensitive to forest fragmentation caused by certain types of logging and gas development. Another huge concern is the loss of hemlock forests from the spread of the Hemlock Woolly Adelgid, which will cause severe population declines in this beautiful, feathered gem.⁴ Blackburnians have already disappeared from dying hemlock forests in New Jersey, southern New York, and southern New England. I hope we can protect enough hemlock forests to keep these beautiful birds in Pennsylvania.



Black-throated Blue Warbler

Black-throated Green Warblers are also associated with hemlock forests in Pennsylvania, but they occupy a different feeding niche, spending most of their time in lower reaches of hemlocks and other conifers, so there’s no competition with the treetop-feeding Blackburnian Warblers. Black-throated Greens will nest in deciduous forests but are more frequently associated with hemlocks.

Black-throated Green Warblers winter in Central America and northern South America. Most of them fly north through Mexico, but a few brave – or foolhardy – ones fly over the Gulf of Mexico, appearing in Texas and other southern states in March. Black-throated Greens are among the early spring migrants. The earliest we’ve ever seen them was on April 24, 2020. That day was a rainy, cool morning, but we watched and heard one singing in the rain as it foraged for insects.

These birds are born to sing – males will belt out their distinctive song all spring and summer, although not as

frequently during nesting season. We even hear them in July and August when many other warblers are silent. You can download a free App called Merlin that helps with bird identification and includes a number of songs for each species. Learn the song of this bird, and you’ll be entertained as you hike through the woods: “zoo-zee-zoo-zoo-zee;” the buzzy notes move up and down the scale.

Although they are primarily a boreal forest breeder, Black-throated Green Warblers are increasing in our state, except in the southeastern and southwestern counties. It’s a forest interior bird, so it’s susceptible to forest fragmentation from energy development. It’s another species that is impacted by dying hemlock forests. Since climate change is also shrinking hemlock forests, it’s possible that some of these warblers could adapt to deciduous

trees⁴.

Black-throated Blue Warblers also show up in our woods in April and often sing in the rain. Our property serves as a stop-over site since these warblers breed at high elevations or in the heavily forested northern tier counties in Pennsylvania. This wood warbler is tightly tied to mature forests but has benefitted from increased deer harvests, causing the shrubby understory vegetation to recover. It’s considered an indicator of high-quality forest with complex structure. Timber harvest practices that retain the canopy, but promote understory regeneration (shelterwood and selection cuts) can increase habitat quality for this beautiful songster.⁴

I look for the white wing patch when I’m warbler watching since it stands out when the darker blues and blacks blend into the foliage. Even females have the white square on their wings; this is sometimes called a “pocket handkerchief.”⁵

Canada Warblers look like they are dressed for a party with their distinctive black necklace and flashy white eye rings, but the population has declined since the 1960s, so there’s no reason to celebrate. They are one of 90 birds listed as a Species of Greatest Conservation Need in

Pennsylvania. Canada Warblers are scarce and rely on young forests or dense understories with wooded bogs, lots of sphagnum moss, and many mossy fern hummocks, where they nest. Like many other warblers, they also nest in ravines filled with hemlocks and a thick understory of mountain laurel or rhododendron. Although we see Canada Warblers during fall migration, we have never seen them in the spring in our woods. Most nest in the boreal forests of Canada, but some breed in Pennsylvania. We've found them in Moosic Mountain barrens, protected on State Game Lands #300 northeast of Scranton, where they find the complex habitat critical to their survival. Their overwintering grounds in the mature forests of the northern Andes are also under threat. They are a late migrant – one of the last spring warblers to arrive and the first to leave in the northern tier. If you are a forest landowner in the Poconos, the northern tier, or high elevations in Somerset County, it will be a challenge to find Canada Warblers, but they could nest in your woods or in shrubby regenerating clear-cuts and rights-of-way.⁴

We've only seen **Cape May Warblers** in our woods during migration since they breed in the far northern spruce-fir forests where they are important predators of the spruce budworm. Our Pennsylvania forests, though, provide much-needed food and safe stopover-sites during migration.

Ironically, this warbler was named by the ornithologist, Alexander Wilson, who first described it in Cape May, New Jersey in 1811. It was not recorded for more than 100 years after that fateful encounter. Not much is known



Canada Warbler



Cape May Warbler

about its breeding, but more is known about its migration and wintering. They are truly long-distance migrants, leaving their winter home in the West Indies as early as March, flying northward to Florida, and eventually arriving in the boreal forests by the end of May.

Unlike other warblers, they will feed on fruit and nectar as they migrate – foraging at sapsucker holes, drinking from hummingbird feeders, and nectaring on flowering shrubs like American black currant (see photo). I was astounded the first time I saw these warblers nectaring on native currants and sporting yellow pollen on their foreheads. I eventually learned that the Cape May is the only warbler with a tubular tongue, which allows it to feed on flowers and fruits. This preference for fruits has gotten them in trouble. Frank Burns, in

1915, in Berwyn, Pa., killed 10 because he claimed they were ruining his grape crop, puncturing the ripe grapes to get the juice. He sent the stomachs to the Biological Survey for analysis, but all they found were insects and spiders.⁶ I planted a patch of flowering American black currant, hoping to entice these beautiful warblers.

I hope you will look for warblers in your woods. The best time to warbler watch is on a cloudy spring morning after a rain, when more warblers will be feeding below the canopy. I promise their bright colors, energetic feeding, and cheery songs will brighten your day.

Laura Jackson, Bedford County
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Photos by Mike and Laura Jackson

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6. Bent, Arthur Cleveland. Life Histories of North American Wood Warblers. 1953. Dover Publications, New York, New York.

Answers to Bird Quiz (page 2)

1. Black Vulture and Turkey Vulture
2. Winter Wren
3. Fish Crow and Common Raven. (bonus: Fish Crow, although Common Raven is close behind.)
4. Purple Martin (bonus: Perhaps most Breeding Bird Survey routes don't happen to pass many new martin colonies.)
5. Swainson's Warbler



Laura or Mike Jackson photographed this Worm-eating Warbler in Bedford County. See article on page 10.

PSO Newsletter

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